What is claimed is:

1.   A method of providing a ringing tone for storage in a communication device, said method comprising the steps of:

5   generating a sequence of musical notes defined by pitch and duration;

modifying the sequence according to a set of modification rules regarding the pitch and the duration of the musical notes within the sequence for providing a modified sequence; and

repeating the modified sequence a number of times for providing a string of

10   musical notes indicative of the ringing tone.

2.   The method of claim 1, further comprising the steps of:

storing digital data indicative of the modified sequence in a computer-readable medium; and

15   retrieving the digital data from the computer-readable medium prior to repeating the modified sequence so as to allow the repeating step to form the string of musical notes based on the digital data.

3.   The method of claim 1, further comprising the step of converting the string of

20   musical notes in an audible form indicative of the ringing tone.

4.   The method of claim 2, further comprising the step of converting the string of musical notes in an audible form indicative of the ringing tone.

25   5.   The method of claim 1, wherein at least one note in the sequence of musical notes is chosen within a range of musical tones in a random fashion.

6.   The method of claim 1, wherein the duration of at least one note in the sequence of musical notes is chosen within a range of time duration.

30

7.   The method of claim 1, wherein the duration of one note in the sequence of

12

musical notes is different from the duration of at least another note in the sequence.

8.   The method of claim 1, wherein the duration of the all the notes in the sequence of musical notes is the same.

5

9.   The method of claim 1, wherein the sequence of musical notes is defined by a note number, and the note number is chosen within a range of positive integers.

10.   The method of claim 1, further comprising the steps of:

10   d) storing digital data indicative of the string of musical notes in a computer-readable medium;

        e) retrieving the digital data from the computer-readable medium; and

        f) converting the digital data into an audible form indicative of the ringing tone.

15   11.   The method of claim 1, wherein the generating step is initiated by a user of the communication device.

12.   The method of claim 2, wherein the steps of (a) through (c) are repeated for producing a plurality of different modified sequences for allowing a user of the

20   communication device to select one of the plurality of different modified sequences for forming the string of musical notes as the ringing tone indicative of an event in the communication device.

13.   The method of claim 12, wherein the communication device is a telephone and the

25   event is indicative of an incoming telephone call.

14.   The method of claim 12, wherein the communication device is a telephone, has means for storing a voice or data message and the event is indicative of the stored voice or data message.

30

15.   The method of claim 12, wherein the communication device is a personal digital

assistant and the event is indicative of a message.

16.   The method of claim 12, wherein the communication device is a personal digital assistant and the event is indicative of a scheduled event in a calendar.

17.   The method of claim 12, wherein the communication device is an electronic organizer and the event is indicative of a scheduled event for reminding the user of the scheduled event.

18.   The method of claim 1, wherein the modification rules are stored in a computer-readable medium in a form of computer program for modifying the sequence.

19.   The method of claim 1, wherein the modification rules include one or more of the following steps:

        eliminating identical pitches occurring in adjacent notes by way of pitch replacement, wherein one of said identical pitches is replaced by another pitch;

        modifying the duration of the notes in a random fashion for producing a non-mechanical playing effect;

        shortening the duration of the notes for producing a non-legato or staccato playing effect;

        correcting a tonal interval between adjacent notes by way of pitch replacement if the tonal interval is a tritone or a seventh;

        changing the pitch of the notes if the pitch corresponds to one of the black keys on a piano;

        changing at least one note into a series of trills if the duration of said note is equal to or greater than a predetermined value; and

        changing the pitch of at least one note according to the relative placement of said note in the sequence.

20.   An apparatus for providing a ringing tone for storage in a communication device, said apparatus comprising:

means, for generating a sequence of musical notes defined by pitch and duration;

means, for modifying the sequence according to a set of modification rules regarding the pitch and the duration of the musical notes within the sequence for providing a modified sequence; and

5   means, for repeating the modified sequence a number of times for providing a string of musical notes indicative of the ringing tone.

21.   The apparatus of claim 20, further comprising:

means, for storing digital data indicative of the modified sequence in a computer-
10   readable medium; and

means, for retrieving the digital data from the computer-readable medium prior to repeating the modified sequence so as to allow the repeating step to form the string of musical notes based on the digital data.

15   22.   The apparatus of claim 20, further comprising means for converting the string of musical notes in an audible form indicative of the ringing tone.

23.   The apparatus of claim 21, further comprising means for converting the string of musical notes in an audible form indicative of the ringing tone.
20

24.   The apparatus of claim 20, wherein at least one note in the sequence of musical notes is chosen within a range of musical tones in a random fashion, and wherein said range of musical tones is stored in a computer-readable medium.

25   25.   The apparatus of claim 20, wherein the duration of at least one note in the sequence of musical notes is chosen within a range of time duration, and wherein said range of time duration is stored in a computer-readable medium.

26.   The apparatus of claim 20, wherein the sequence of musical notes is defined by a
30   note number and the note number is chosen within a range of positive integers, and wherein said range of positive integers is stored in a computer-readable medium.

27.   The apparatus of claim 20, further comprising:

means, for storing digital data indicative of the string of musical notes in a computer-readable medium; and

5   means, for retrieving the digital data from the computer-readable medium; and

means, for converting the digital data into an audible form indicative of the ringing tone.

28.   The apparatus of claim 20, wherein the generating means generates the sequence

10   of musical notes in response to an initiation signal provided by the user of the communication device.

29.   The apparatus of claim 21, further comprising means for providing and storing a plurality of different modified sequences in the computer-readable medium for allowing a

15   user of the communication device to select one of the different modified sequences as the ringing tone indicative of an event in the communication device.

30.   The apparatus of claim 21, wherein the modification rules are stored in a computer-readable medium and wherein the modification rules include one or more of the

20   following steps:

eliminating identical pitches occurring in adjacent notes by way of pitch replacement wherein one of said identical pitches is replaced by another pitch;

modifying the duration of the notes in a random fashion for producing a non-mechanical playing effect;

25   shortening the duration of the notes for producing a non-legato or staccato playing effect;

correcting a tonal interval between adjacent notes by way of pitch replacement if the tonal interval is a tritone or a seventh;

changing the pitch of the notes if the pitch corresponds to one of the black keys on

30   a piano;

changing at least one note into a series of trills if the duration of said note is equal

to or greater than a predetermined value; and

changing the pitch of at least one note according to the relative placement of said note in the sequence.

5   31.   A communication device comprising:

means, in response to an event in the communication device, for producing an event signal;

a computer-readable medium for storing digital data indicative of a sequence of musical notes defined by pitch and duration, wherein the pitch and the duration of the

10   musical notes are chosen in a random fashion but modified according to a set of modification rules regarding the pitch and the duration of the musical notes within said sequence for making a modified sequence, and wherein the modified sequence is repeated a number of times for forming a repeated sequence;

means, responsive to the event signal, for retrieving the digital data from the

15   computer-readable medium;

means, responsive to the retrieved digital data, for converting the digital data into a further signal; and

a sound producing device, responsive to said further signal, for providing a ringing tone indicative of the retrieved digital data.

20

32.   The communication device of claim 31, further comprising a telephone and the event includes an incoming telephone call, wherein the ringing tone signals the incoming telephone call.

25   33.   The communication device of claim 31, further comprising a telephone and the event includes a voice or data message, wherein the ringing tone signals the voice or data message.

34.   The communication device of claim 31, further comprising a personal digital

30   assistant and the event includes a scheduled event stored in a calendar in the personal digital assistant, wherein the ringing tone signals the scheduled event.

35.   The communication device of claim 31, further comprising an electronic organizer and the event includes a scheduled event stored in a calendar in the electronic organizer, wherein the ringing tone signals the scheduled event.

36.   The communication device of claim 31, further comprising:

means, responsive to an initiation signal, for generating the sequence of musical notes;

means, responsive the sequence, for modifying the sequence of musical notes and for providing the modified sequence;

means, response to the modified sequence, for repeating the modified sequence.

37.   The communication device of claim 36, wherein the initiation signal is provided by a user of the communication device.

38.   The communication device of claim 37, further comprising means for providing and storing a plurality of different modified sequences in the computer-readable medium for allowing the user to choose one of the different modified sequences for forming the string the musical notes as the ringing tone.

39.   The communication device of claim 31, wherein the duration of at least one note in the sequence of musical notes is chosen within a range of time duration, and wherein said range of time duration is stored in the computer-readable medium.

40.   The communication device of claim 31, wherein the sequence of musical notes is defined by a note number and the note number is chosen within a range of positive integers, and wherein said range of positive integers is stored in the computer-readable medium.

41.   The communication device of claim 31, wherein the modification rules are stored in the computer-readable medium, and wherein the modification rules include one or

18

more of the following steps:

eliminating identical pitches occurring in adjacent notes by way of pitch replacement, wherein one of said identical pitches is replaced by another pitch;

modifying the duration of the notes in a random fashion for producing a non-mechanical playing effect;

shortening the duration of the notes for producing a non-legato or staccato playing effect;

correcting a tonal interval between adjacent notes by way of pitch replacement if the tonal interval is a tritone or a seventh;

changing the pitch of the notes if the pitch is corresponding to one of the black keys on a piano;

changing at least one note into a series of trills if the duration of said note is equal to or greater than a predetermined value; and

changing the pitch of at least one note according to the relative placement of said note in the sequence.